======= WPI =======

TI - Electric power convertor - has commutation reactor connected between side terminal of main circuit bridge and auxiliary circuit bridge, which turn ON or OFF main circuit bridge, in resonance with commutation capacitor

AB - J11055954 NOVELTY - Commutator capacitors (31e-34e) are connected between nodes of each parallel circuit of auxiliary bridge circuit (30). Commutation reactors (21a,21b) which turn ON or OFF a main circuit bridge (10) are connected between the AC side terminals of the main and auxiliary circuit bridges. The AC terminals of the circuit bridges are connected, individually. DETAILED DESCRIPTION - The main circuit bridge (10) consists of several main switch circuits (11-14) which have a main arc extinguishing element and a diode connected in series. The auxiliary bridge circuit (30) has several auxiliary circuit switches (31-34) which have parallelly connected series circuit of arc extinguishing element and a diode.

- USE - None given.
- ADVANTAGE - Switching loss during turn OFF of main circuit switch is reduced, hence conversion efficiency is improved. DESCRIPTION OF DRAWING (S) - The figure shows circuit block diagram of electric power convertor. (10) Main circuit bridge; (11-14) Main switch circuits; (21a,21b) Commutation reactors; (30) Auxiliary bridge circuit; (31-34) Auxiliary circuit switches; (31e-34e) Commutator capacitors.
- (Dwg.1/6)

PN - JP11055954 A 19990226 DW199919 H02M7/48 008pp
PR - JP19970210311 19970805
PA - (FJIE ) FUJI ELECTRIC CO LTD
MC - U24-D05A1A X12-J05A1A
DC - U24 X12
IC - H02M7/48 ;H02M7/5387
AN - 1999-222002 [19]

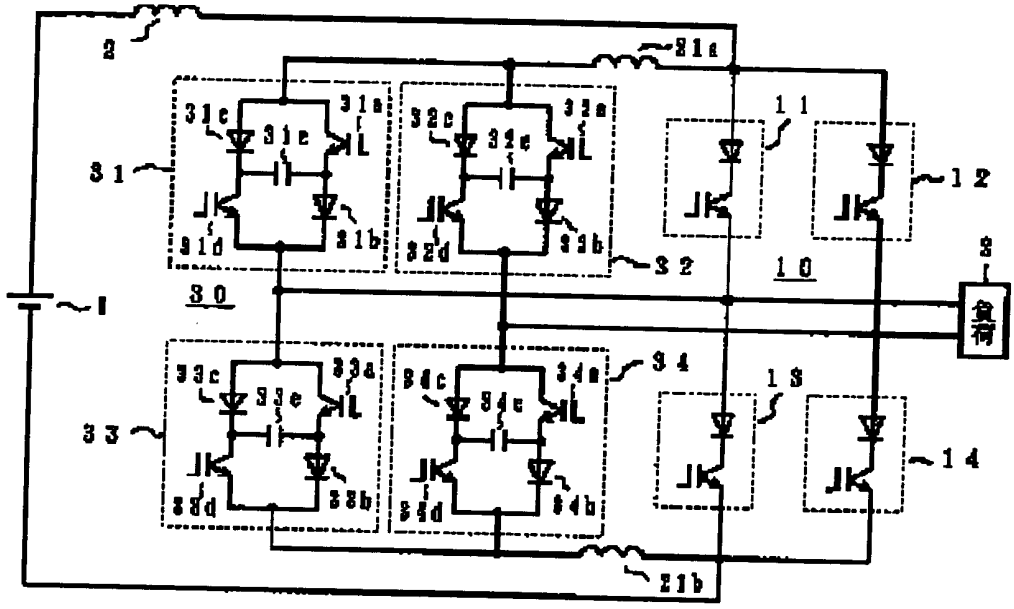
======= PAJ =======

TI - CURRENT TYPE POWER CONVERTER CIRCUIT

AB - PROBLEM TO BE SOLVED: To reduce a voltage stress or switching loss during turn-on or turn-off of a semiconductor element constituting a main circuit switch by providing a resonance circuit by a commutation capacitor constituting an auxiliary switch circuit with a commutation reactor.

- SOLUTION: A current type power converter is constituted of a DC power supply 1, a DC reactor 2, a two-phase main circuit bridge comprising 4 sets of main circuit switches 11 to 14, and a two-phase auxiliary circuit bridge 30 comprising 4 sets of auxiliary switch circuits 31 to 34 and two sets of commutation reactors 21a, 21b. By these, a voltage stress of switching loss during turn-on or turn-off of a semiconductor element constituting the main circuit switches 11 to 14 can be reduced and, as a result, a current type power conversion circuit can be made compact and its conversion efficiency can be improved.

PN - JP11055954 A 19990226
PD - 1999-02-26
ABD - 19990531
ABV - 199905
AP - JP19970210311 19970805
PA - FUJI ELECTRIC CO LTD
IN - KONISHI YOSHIHIRO
I - H02M7/48 ;H02M7/5387


2
21a
31
31c
31e
31a
31d
31b
32
32c
32e
32a
32d
32b
11
12
10
3
負荷
1
30
33
33c
33e
33a
33d
33b
34
34c
34e
34a
34d
34b
13
14
21b